

# Terrestrial Animal Health Standards Commission Report September 2016

## CHAPTER 11.11.

### INFECTION WITH LUMPY SKIN DISEASE VIRUS

#### Article 11.11.1.

##### General provisions

Lumpy skin disease (LSD) susceptible animals are cattle (*Bos indicus* and *B. taurus*) and water buffaloes (*Bubalus bubalis*) and occasionally certain wild ruminants.

For the purpose of the *Terrestrial Code*, LSD is defined as an infection of cattle (~~*Bos indicus* and *B. taurus*~~) and water buffaloes (~~*Bubalus bubalis*~~) with lumpy skin disease virus (LSDV).

The following defines *infection* with LSDV:

- 1) LSDV has been isolated from a sample from cattle or water buffaloes; or
- 2) antigen or nucleic acid specific to LSDV, excluding vaccine strains, has been identified in a sample from cattle or water buffaloes showing clinical signs consistent with LSD, or epidemiologically linked to a suspected or confirmed case, or giving cause for suspicion of previous association or contact with LSDV; or
- 3) antibodies specific to LSDV, which are not a consequence of *vaccination*, have been identified in a sample from cattle or water buffaloes that either show clinical signs consistent with LSD, or are epidemiologically linked to a suspected or confirmed case.

For the purposes of the *Terrestrial Code*, the *incubation period* for LSD shall be 28 days.

Standards for diagnostic tests and vaccines are described in the *Terrestrial Manual*.

#### Article 11.11.2.

##### Safe commodities

When authorising import or transit of the following *commodities*, *Veterinary Authorities* should not require any LSD related conditions regardless of the status of the animal population of the *exporting country*.

- 1) skeletal muscle *meat*;
- 2) casings;
- 3) gelatine and collagen;
- 4) tallow;
- 5) hooves and horns;
- 6) ~~horns.~~

#### Article 11.11.3.

##### Country or zone free from LSD

A country or a *zone* may be considered free from LSD when *infection* with LSDV is notifiable in the entire country, importation of cattle and water buffaloes and their *commodities* is carried out in accordance with this chapter, and either:

- 1) the country or *zone* is historically free as described in point 1 a) of Article 1.4.6.; or
- 2) the country or *zone* has prohibited *vaccination*, has not reported any *case of infection* with LSDV and a clinical *surveillance* programme in accordance with Article 11.11.14. has demonstrated no evidence of *infection* with LSDV in the country or *zone* for at least three years; or
- 3) the country or *zone* has prohibited *vaccination*, has not reported any *case of infection* with LSDV and a clinical, virological and serological *surveillance* programme in accordance with Article 11.11.14. has demonstrated no evidence of *infection* with LSDV in the country or *zone* for at least two years.

A country or *zone* free from LSD that is adjacent to an infected area country or zone should include a *zone* in which *surveillance* is conducted in accordance with Article 11.11.14.

A country or *zone* free from LSD will not lose its status as a result of introduction of seropositive or vaccinated cattle or water buffaloes or their *commodities*, provided they were introduced in accordance with this chapter.

#### Article 11.11.3bis.

##### Recovery of free status

- 1) When a case of LSD occurs in a country or zone previously free from LSD, one of the following waiting periods is applicable to regain free status:
  - a) 14 months after a stamping-out policy has been applied and during which period clinical, virological and serological surveillance has been conducted in accordance with Article 11.11.14.;
  - b) 26 months after a stamping-out policy has been applied and during which period clinical surveillance alone has been conducted in accordance with Article 11.11.14.;
  - c) when a stamping-out policy is not applied, Article 11.11.3. applies.
- 2) When preventive vaccination is conducted in a country or zone free from LSD, in response to a threat but without the occurrence of a case of LSD, free status may be regained eight months after the last vaccination when clinical, virological and serological surveillance has been conducted in accordance with Article 11.11.14.

#### Article 11.11.4.

##### **Recommendations for importation from countries or zones free from LSD**

###### For domestic cattle and water buffaloes

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that the animals:

- 1) showed no clinical sign of LSD on the day of shipment;
- 2) come from a country or *zone* free from LSD.

#### Article 11.11.5.

##### **Recommendations for importation from countries or zones not free from LSD**

###### For domestic cattle and water buffaloes

Veterinary Authorities should require the presentation of an *international veterinary certificate* attesting that the animals:

- 1) showed no clinical sign of LSD on the day of shipment;

- 2) were kept since birth, or for the past 60 days prior to shipment, in an *epidemiological unit* where no case of LSD occurred during that period;
- 3) were vaccinated against LSD according to manufacturer's instructions at least 60 days prior to shipment;
- 4) were demonstrated to have antibodies at least 30 days after *vaccination*;
- 5) were kept in a *quarantine station* for the 28 days prior to shipment.

Article 11.11.6.

**Recommendations for importation from countries or zones free from LSD**

For semen of cattle and water buffaloes

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:

- 1) the donor males:
  - a) showed no clinical sign of LSD on the day of collection;
  - b) were kept in a free country or *zone* for at least 28 days prior to collection;
- 2) the semen was collected, processed and stored in accordance with Chapters 4.5. and 4.6.

Article 11.11.7.

**Recommendations for importation from countries or zones not free from LSD**

For semen of cattle and water buffaloes

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:

- 1) the donor males:
  - a) showed no clinical sign of LSD on the day of collection and the following 28 days;
  - b) were kept for the ~~past~~ 60 days prior to collection, in an *artificial insemination centre* where no case of LSD occurred during that period;
  - c) and EITHER:
    - i) were ~~regularly~~ vaccinated regularly against LSD according to manufacturer's instructions, the first *vaccination* being administrated at least 60 days prior to the first semen collection; and
    - ii) were demonstrated to have antibodies against LSDV at least 30 days after *vaccination*;

OR

  - iii) were subjected to a serological test to detect antibodies specific to LSDV, with negative results, at least every 14 days throughout the collection period and one test 14 days after the final collection for this consignment; and
  - iv) were subjected to agent detection by PCR conducted on blood samples collected at commencement and conclusion of, and at least every 14 days during, semen collection for this consignment, with negative results; and
  - v) the semen to be exported was subjected to agent detection by PCR;
- 2) the semen was collected, processed and stored in accordance with Chapters 4.5. and 4.6.

## Article 11.11.8.

**Recommendations for importation from countries or zones free from LSD**For embryos of cattle and water buffaloes

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:

- 1) the donor females:
  - a) showed no clinical sign of LSD on the day of collection of the embryos;
  - b) kept for at least 28 days prior to collection in a free country or zone;
- 2) the embryos were collected, processed and stored in accordance with Chapters 4.7., 4.8. and 4.9., as relevant;
- 3) the semen used for the production of the embryos complied with Articles 11.11.6. or 11.11.7., as relevant.

## Article 11.11.9.

**Recommendations for importation from countries or zones not free from LSD**For embryos of cattle and water buffaloes

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:

- 1) the donor females:
  - a) showed no clinical sign of LSD on the day of collection and the following 28 days;
  - b) were kept in an *establishment* where no case of LSD occurred during the 60 days prior to collection;
  - c) and EITHER:
    - i) were ~~regularly~~ vaccinated regularly against LSD according to manufacturer's instructions, the first *vaccination* being administrated at least 60 days prior to the first collection; and
    - ii) were demonstrated to have antibodies against LSDV at least 30 days after *vaccination*;

OR

  - iii) were subjected to a serological test to detect antibodies specific to LSDV, with negative results, on the day of collection and at least 21 days after collection; and
  - iv) were subjected to agent detection by PCR with negative results on a blood sample on the day of collection;
- 2) the semen used for the production of the embryos complied with Articles 11.11.6. or 11.11.7., as relevant;
- 3) the embryos were collected, processed and stored in accordance with Chapters 4.7., 4.8. and 4.9.

## Article 11.11.10.

**Recommendations for the importation of milk and milk products**

*Veterinary Authorities of importing countries* should require the presentation of an *international veterinary certificate* attesting that the *milk* or the *milk products*:

- 1) have been derived from animals in a country or *zone* free from LSD;

OR

- 2) were subjected to pasteurisation or any combination of control measures with equivalent performance as described in the Codex Alimentarius Code of Hygienic Practice for Milk and Milk Products.

#### Article 11.11.11.

#### **Recommendations for importation of products of animal origin from cattle and water buffaloes intended for agricultural or industrial use**

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:

- 1) these products have been derived from animals that have been kept in a country or *zone* free from LSD since birth or for at least the past 28 days; or
- 2) these products have been processed to ensure the destruction of the LSDV.

#### Article 11.11.12.

#### **Recommendations for importation of meal and flour from blood, meat other than skeletal muscle, or bones from cattle and water buffaloes**

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:

- 1) these products have been derived from animals in a country or *zone* free from LSD; or
- 2)
  - a) the products were processed using heat treatment to a minimum internal temperature of 65°C for at least 30 minutes;
  - b) the necessary precautions were taken after processing to avoid contact of the *commodities* with any potential source of LSDV.

#### Article 11.11.13.

#### **Recommendations for importation of hides of cattle and water buffaloes**

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:

- 1) these products have been derived from *animals* that have been kept in a country or *zone* free from LSD since birth or for at least the past 28 days; or
- 2) these products ~~had have been; processed to ensure the destruction of LSDV, in premises controlled and approved by the Veterinary Authority of the exporting country.~~
  - a) derived from animals which have undergone ante- and post-mortem inspection in accordance with Chapter 6.2. with favourable results;
  - b) dry-salted or wet-salted for a period of at least 14 days prior to dispatch; or
  - c) treated for a period of at least seven days in salt (NaCl) with the addition of 2% sodium carbonate (Na<sub>2</sub>CO<sub>3</sub>); or
  - d) dried for a period of at least 42 days at a temperature of at least 20°C.

## Surveillance

### 1. General principles of surveillance

A Member Country should justify the *surveillance* strategy chosen as being adequate to detect the presence of *infection* with LSDV given the prevailing epidemiological situation in accordance with Chapter 1.4. and Chapter 1.5. under the responsibility of the *Veterinary Authority*.

The ~~Veterinary Authority~~ Veterinary Services should implement programmes to raise awareness among farmers and workers who have day-to-day contact with livestock, as well as *veterinary paraprofessionals*, *veterinarians* and diagnosticians, who should report promptly any suspicion of LSD.

In particular Member Countries should have in place:

- a) a formal and ongoing system for detecting and investigating *outbreaks* of *disease*;
- b) a procedure for the rapid collection and transport of samples from suspected *cases* of *infection* with LSDV to a *laboratory* for diagnosis;
- c) a system for recording, managing and analysing diagnostic and *surveillance* data.

### 2. Clinical surveillance

Clinical *surveillance* requires the physical examination of susceptible animals.

*Surveillance* based on clinical inspection provides a high level of confidence of detection of *disease* if a sufficient number of clinically susceptible animals is examined regularly at an appropriate frequency and investigations are recorded and quantified. Clinical examination and diagnostic testing should be pre-planned and applied using appropriate types of samples to clarify the status of suspected cases.

### 3. Virological and serological surveillance

An active programme of surveillance ~~programme~~ of susceptible populations to detect evidence of *infection* with LSDV is useful to establish the status of a country or *zone*. Serological and molecular testing of cattle and water buffaloes may be used to detect presence of *infection* with LSDV in naturally infected animals.

The study population used for a serological survey should be representative of the population at risk in the country or *zone* and should include susceptible unvaccinated animals.

### 4. Surveillance in high-risk areas

*Disease-specific enhanced surveillance* in a free country or *zone* should be carried out over an appropriate distance from the border with an infected country or *zone*, based upon geography, climate, history of *infection* and other relevant factors. The *surveillance* should be carried out over a distance of at least 20 kilometres from the border with that country or *zone*, but a lesser distance could be acceptable if there are relevant ecological or geographical features likely to interrupt the transmission of LSDV. A country or *zone* free from LSD may be protected from an adjacent infected country or *zone* by a *protection zone*.

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